

## Description

Special Thematic Issue for the journal "Current Drug Targets"

### Thematic Issue:

## The Novel Use of Lipids as Diagnostic Tools and Therapeutics in Cancer: Recent Insights and Challenges

*Guest Editor: Prof. Chandi C. Mandal, PhD*

### • Scope of the Thematic Issue:

Despite multiple scientific and medical advances, cancer remains the second leading cause of death globally. Recent developments in diagnosis, prognosis and treatment modalities significantly increase the overall survival and quality of life in cancer patients. The etiology of many cancer types and subtypes is not yet well defined, but both genetic mutations and epigenetic changes act synergistically in tumor development and contribute to metastasis. Alterations and/or abnormality in intrinsic factors in the extracellular and intracellular environment modulate tumorigenic activity at primary tumor and metastatic sites. An abundance of research articles have linked the dysregulation of intrinsic lipid molecules and their metabolites with cancer growth, metastasis, and therapy resistance in varied experimental models and clinical studies. However, limited information is accessible concerning the relationship between lipids and cancer. This thematic issue emphasizes work focused on lipid homeostasis, lipid metabolism, reprogramming of lipid metabolic networks, lipid metabolites, and phospholipids linked with tumorigenic potential and drug resistance along with metastatic activity. This issue aims to provide information concerning the involvement of obesity, dietary habits, gut microbes, and other factors, such as mitochondria, in lipid-linked cancers. Additionally, this thematic issue targets developments in identification of fatty acids, which can be used in the treatment of cancers and treatment-associated complications as well as novel approaches in drug delivery.

**Keywords:** Cancer, Cancer metastasis, Cholesterol, Fatty acids, Omega-3 fatty acids, Lipid metabolism, Sphingolipids,

### Sub-topics:

The sub-topics to be covered within the issue include:

- Influence of cholesterol and its metabolites in cancer
- Dysregulation of phospholipids and sphingolipids in cancer
- Disruption of fatty acid and cholesterol homeostasis in cancer
- Dietary contribution and gut microbes in lipid-linked tumorigenesis
- Fatty acid and lipid use in cancer diagnosis and therapy
- Reprogramming of lipid metabolism during cancer development
- Involvement of adipocytes in cancer

### Schedule:

✧ Thematic issue submission deadline: December 31, 2020

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