Tentative Outline

**Anti-Cancer Agents in Medicinal Chemistry**

*Guest Editor(s): Dr. Raj Kumar Koiri, Dr. Aditi Mehrotra*

**TITLE: Network-based drug discovery, anti-cancer molecular targets and therapeutic use of phytochemicals**

**Aims & Scope:**
Cancer is classified as a complex and heterogeneous collection of disease with over 100 different types of cancer. Numerous medicinal plants have been reported to have anticancer effect and effort for finding new anticancer agents with better efficacy and lesser side effects is still going on. Due to increasing cost of drug development, there is an urgent need for innovative approaches for target identification and efficacy prediction to uncover the therapeutic effect of drugs. A network-based approach is expected to offer important insights into the relationship between plants based active products and anticancer targets. In recent times, a renewed interest in understanding metabocentric adaptation occurring in the cancer cells vis-à-vis inflammation, angiogenesis and metastasis has been observed. Given the functional interdependencies between anti-cancer molecular targets and phytochemicals, emerging tools of network medicine offer a platform to explore systematically complexity of cancer biology, drug targets and therapeutic use of phytochemicals. In the special issue we invite the researchers to contribute original and review articles regarding network-based drug discovery, anti-cancer molecular targets and therapeutic use of phytochemicals.

**Key words:** Resveratrol; Nicotinamide; Phosphodiesterase inhibitors; Ingenol-3-angelate; Terpenoids; Fisetin; Emodin; Microcystin

**Subtopics:**
(a) Modulation of bioenergetic and inflammatory pathway in the treatment of cancer by phytochemicals
(b) Transcriptomics, metabolomics and metagenomics of cancer therapeutics
(c) Herbal medicines targeting angiogenesis and metastasis in the treatment of cancer

**Schedule:**
- Manuscript submission deadline: **30th November, 2016**
- Peer Review Due: **31st December, 2016**
- Revision Due: **31st January, 2017**
- Notification of acceptance by the Guest Editor: **15th February, 2019**

**Tentative Publication Date: September, 2018**

**Final manuscripts due:**
1. Metabolic regulation of cancer by resveratrol and nicotinamide
2. Phosphodiesterase inhibitors and cancer
3. Ingenol-3-angelate suppresses skin tumor development in neonatal rats by modulating NFkB-Cox2 cross-talk
4. Terpenoids modulating novel signaling pathways in human malignancies
5. Regulation of Akt-COX2-EP1-apoptotic pathway by Fisetin in the treatment of cancer
6. Modulation of Slit-3-Robo-HSPG signaling for inhibition of angiogenesis and tumor growth
7. Emodin as modulators of Akt-HIF1α-bioenergetic-apoptotic pathways in hepatocellular carcinoma
8. Role of cyanotoxin Microcystin-LR in the development and progression of cancer
9. Transcriptomics, metabolomics and metagenomics of cancer and its therapeutics