

**Tentative Outline**  
**Anti-Cancer Agents in Medicinal Chemistry**  
*Guest Editor(s): Denisa FICAI & Anton FICAI*

**NEW CHALLENGES IN CANCER TREATMENT, FROM  
NOVEL AGENTS TO INNOVATIVE ADMINISTRATION**

**Aims & Scope:**

Cancer is a terrible disease of the century which make a lot of deaths, worldwide. This is why, many researchers are trying to find solutions or the increase the efficiency of the existent ones. The development of new antitumoral agents is essential but require a lot of work (research including synthesis, extractions, purifications, etc.), time and resources so, a more efficient administration of the existent agents could be of interest. Drug delivery and especial targeted drug delivery are increasingly used in improving the antitumoral efficiency and to reduce the side effects at non-desired sites. A special attention will be paid for the use of natural compounds with antitumoral activity. Depending on the nature of the active agent, the nature of the cancerous tissue/organ and the characteristics of the normal and pathogen body fluids, etc., the design of the drug delivery systems will be made such as to assure the best efficiency. It is desired that the active agents to be released only in a targeted way (only in the tumoral region of the tissue/organ). Morphological and compositional design will assure the above mentioned characteristics. An interesting aspect of these delivery systems, with increasing interest for the researchers and clinicians, is related to the involvement of the “external and internal triggered-stimuli”. pH, thermal and magnetical stimuli are especially used for adjusting the delivery characteristics and can be also applied for cancer therapy. Antitumoral systems with multiple mechanisms of action are welcome because can enhance the overall antitumoral activity and can assure a long term antitumoral activity with lower side effects.

**Key words:** targeted drug delivery for cancer therapy; natural and synthetic anticancer agents; stimuli-triggered delivery; multifunctional systems in cancer therapy; contrast agents for imaging

**Subtopics:**

- Synthesis and characterisation of antitumoral agents;
- Natural antitumoral agents;
- Drug delivery systems for optimized release;
- Support design for targeted delivery;
- External stimuli-triggered delivery systems;
- Multifunctional drug delivery systems for cancer therapy;
- Control of the antitumoral activity by combination chemotherapy;
- Antitumoral activity, mechanisms of action.

**Schedule:**

Manuscript submission deadline: December 2016

Peer Review Due: May 2017

Revision Due: June 2017

Notification of acceptance by the Guest Editor: July 2017

Final manuscripts due: August 2017